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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/870,442	05/31/2001	Bomi M. Bilimoria	07990.0023	1219

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EXAMINER

METZMAIER, DANIEL S

ART UNIT

PAPER NUMBER

1712

DATE MAILED: 05/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/870,442

Applicant(s)

BILIMORIA, BOMI M.

Examiner

Daniel S. Metzmaier

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 1/13/2004; 2/4/2004; & 3/4/2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 44-51 and 53-79 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 44-51 and 53-79 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on January 13, 2004 has been entered.

Specification

2. The amendment filed May 12, 2003 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: to the extent the Apparent Hercules Viscosity was calculated from inherent data originally set forth in the original specification, applicants need to where said determination in the specification was, complete with the bob geometry and spring set employed to make the measurements.

Applicant is required to clarify or present further evidence and clarification or to cancel the new matter in the reply to this Office Action.

3. The disclosure is objected to because of the following informalities: the tables are not labeled. To the extent the first column is the initial viscosity, said tables do not clearly state this.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 70-73¹, 74-77 and 79 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Regarding claims 70-73, applicants do not adequately provide basis for the reduction in viscosity as set forth in the independent claim for the remaining species, which do not include natural clays as shown in the examples. Said examples are the only possible basis for methods that reduce the viscosity as claimed in the independent claims. There is no basis in the originally filed specification that applicants had possession of the methods as now claimed that employ particulates other than the natural clays and also a viscosity reduction as claimed.

Regarding claims 74-77 and 79, the open ended range for the viscosity are deemed to be new matter. The characterization of "at least" suggest an increase, greater than, a larger quantity.

Assuming *arguendo* that the Apparent Hercules Viscosity data would not constitute new matter based on the amendment of May 12, 2003, it is unclear how a

greater viscosity value also fulfills the 30% reduction in viscosity for said greater values and wherein the original specification applicants disclosed said range.

Furthermore, the new matter issue regarding the Apparent Hercules Viscosity limitations is directed related to the issue in the preceding section.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 74-77 and 79 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear what viscosity applicants intend to define by the said limitations since the various limitations do not set forth whether the viscosity is the initial or the final viscosity of the suspensions and the data cited as basis for the amendment seems to recite both initial and final viscosity values.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical

¹ Claim 72 contains 3 species including an aluminosilicate. The species "an aluminosilicate" is deemed to include kaolin. The claim is included in this rejection based on the other species, synthetic silica and synthetic silicate.

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Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000.

Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

9. Claims 44-51, 53-57, 59-66, 68-69, 72 and 74-78 are rejected under 35 U.S.C. 102(e) as being anticipated by Hurst, US 6,156,284. Hurst (abstract; column 3, lines 46 et seq; column 4, lines 12 et seq; column 7, lines 5 et seq; column 8, line 62 – column 9, line 4; examples and claims) disclose processes of making fluid particulate suspensions wherein said suspensions have a Brookfield viscosity of at least 30% lower than the initial Brookfield viscosity. Hurst (column 8, line 62 – column 9, line 4) discloses a viscosity reduction of 70 to 95% of the initial Brookfield viscosity. The Hercules viscosity reduction would have been expected to be inherent to the methods and products of the Hurst reference.

To the extent the Hurst reference may include further steps, said steps are not excluded by applicants open transitional language. The Hurst reference at least in example 2 discloses montmorillonite kaolin, which has a platy structure and reads on of 76-77 and 79. Furthermore, the particular viscosities would have been inherent to the processes disclosed in the Hurst reference, which discloses viscosity reduction.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 58, 74-77 and 79 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hurst, US 6,156,284. Hurst (abstract; column 3, lines 46 et seq; column 4, lines 12 et seq; column 7, lines 5 et seq; column 8, line 62 – column 9, line 4; examples and claims) disclose processes of making fluid particulate suspensions wherein said suspensions have a Brookfield viscosity of at least 30% lower than the initial Brookfield viscosity as set forth in the above anticipation rejection.

Hurst differs from claim 58 in the dispersing aqueous composition claimed; comprising sodium polyacrylate, soda ash (sodium carbonate) and water.

Hurst (examples) discloses the use of water with lithium or potassium carbonates and (column 6, lines 22 et seq) teaches the use of alkali metal salts. Hurst (column 8, lines 45 et seq) further teaches the addition of dispersants including (lines 55 and 56) the addition of sodium polyacrylate.

It would have been obvious to one of ordinary skill in the art at the time of applicants' invention to employ the combination of soda ash (sodium carbonate) with sodium polyacrylate and water as a dispersing medium for the clays as taught and clearly contemplated in the Hurst reference.

To the extent that Hurst differs from claims 74-77 and 79, Hurst discloses viscosity reduction up to 95% and initial viscosities of from about 1000 cps to about 4000 cps reduced down to 200 cps to about 770 cps. It would have been obvious to one of ordinary skill in the art at the time of applicants' invention to reduce the clays to viscosities clearly within the ranges disclosed in the Hurst reference.

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12. Claim 67 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hurst, US 6,156,284, as applied to claims 44-66, 68-69, 72 and 74-78 above, and further in view of Kunkle et al, US 4,030,941. Hurst (abstract; column 3, lines 46 et seq; column 4, lines 12 et seq; column 7, lines 5 et seq; column 8, line 62 – column 9, line 4; examples and claims) disclose processes of making fluid particulate suspensions wherein said suspensions have a Brookfield viscosity of at least 30% lower than the initial Brookfield viscosity as set forth in the above rejections.

Hurst differs from claim 67 in dewatering the particulate by spray drying.

Kunkle et al (abstract and column 5, lines 30-43) discloses methods of reducing the viscosity of clays, wherein spray drying is taught as a conventional drying technique. Kunkle et al further teaches that various drying methods including oven drying and spray drying produce substantially similar results.

These references are combinable because they teach reducing the viscosity of clay compositions. It would have been obvious to one of ordinary skill in the art at the time of applicants' invention to employ spray drying in the processes of the Hurst reference as a conventional drying step as taught in the Kunkle et al reference.

Response to Arguments

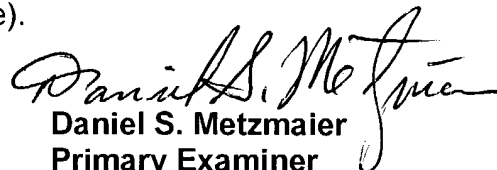
13. Applicant's arguments with respect to claims 44-78 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel S. Metzmaier whose telephone number is (703) 308-0451. The examiner can normally be reached on 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Daniel S. Metzmaier
Primary Examiner
Art Unit 1712

DSM